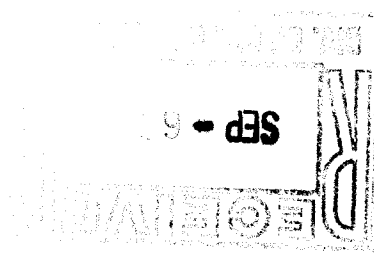


**GENWAL COAL COMPANY**

September 2, 1994

Mr. Darron Haddock  
Permit Supervisor  
Division of Oil, Gas, and Mining  
State of Utah Natural Resources  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203



Subject: Response to Stipulation #1 for Genwal Coal Company LBA#9  
Technical Analyses Deficiencies comments, Permit No.  
ACT/015/032.

Dear Darron:

Enclosed you will find updated text and plates which address your July 22, 1994 Technical Analysis. The accompanying sheet will define the location and nature of the changes.

Genwal is pleased to submit our response and believes that we have acted in good faith to address each comment or technical concern. Should you or your staff have any questions, please call.

Sincerely,

Enclosures:

**R645-301-120**

1. A new sentence was inserted to clarify the previous statement on page 3-31.
2. More legible design calculation data sheets are being provided for the hydrologic appendices.
3. A. The statement on page 2-9 was incorrect which indicated that the coal was acid forming and a new statement has been inserted.  
  
B. The chemical overburden analysis refers to the soils and not for coal or the coal overburden.

**R645-301-514.330 Inspections Deficiency:**

1. Genwal uses an inspection sheet which was provided as an example by the Division. The inspection sheet has been used for the past several years. Genwal believes that since the Division provided the inspection sheet as an example and that the inspection sheet addresses the items listed in **R645-301-512, that the current sheet is adequate.** However, Genwal will change to a new inspection sheet if the Division has additional items which the regulations require to be covered.

**R645-301.612 Certification Deficiency:**

1. The cross-sections and plates have been certified by a professional engineer.
2. Geologic logs and the associated stratigraphic column do not require certification under the Divisions rules and thus have not been certified.

**R645-301-622.100 Elevations and Locations of Test Borings and Core Samples Deficiencies:**

1. MW-4 and MW-5 down holes do not provide any information pertaining to coal and overlying strata. Both were removed from the current plates and are not being referenced.
2. IMBH-1 (MW4-UP) has been added to Plate 5-2.
3. DH-2 is depicted on Plate 5-2
4. Measured Section A represents the geologic cross-section as

measured at the mine portal. Measured Section B is from an area 500 feet east of the portal. The locations of these cross-sections is depicted on Plate 6-1.

5. The elevation of DH-5 has been added to the first page of the log.
6. GS-CLB-1 has been interpreted by BLM as not having any Bear Canyon coal. A conflict exists in interpretation between what coal seams are present and their thickness in this drillhole. The latest available information from the BLM (Mr. Jim Kohler) indicates that coal does not exist within the Bear Canyon seam within these logs.

**R645-301-612.200 Coal Seams, Overburden, Stratum Below Coal Seams Deficiencies:**

1. After review of the Radian data base which created Plates 6-4, 6-5, and 6-6, the information shows that DH-1 and DH-2 were in fact used to generate these plates.
2. As explained above GS-CLB-1 has not been used on Plate 6-5 because of the conflicting data and because of the apparent lack of Bear Canyon Coal at GS-CLB-1.

**R645-301-624.300 Samples collected and Analyzed from Test Borings and Drill Cores Deficiencies:**

1. The appropriate text has been included in Chapter 6 to address the acid/toxic requirements for 3 coal samples in lease ML-21569.

**R645-301-712 Certification of Cross-Sections, Maps, and Plans Deficiency:**

1. Plates 7-12, 7-14, and 7-15 have been certified by a registered professional engineer.

**R645-301-722 Cross Sections and Maps Deficiency.**

1. Leases SL-062648 and U-54762 are shown on the new versions of 7-12, 7-14, and 7-15.

**R645-301-724.100 Baseline Groundwater Information Deficiencies:**

1. The mine water budget in Chapter 7 has been rewritten to provide a more concise description.

2. Little Bear Springs is not within or contiguous to Genwal's mining operations or permit boundaries (Little Bear Springs is approximately 2 miles from the mine workings). Thus, Genwal has not included water rights information on Little Bear Springs.
3. Baseline data on iron and manganese are provided in the text and in the laboratory data in the previous submittals. Seep and Spring water quality data are provided in Appendix 7-20.

Plus, Genwal has committed to providing total iron and manganese analyses for the future groundwater sampling. Tables 7-4 and 7-5 on pages 7-42 and 7-44, respectively, indicate that laboratory samples will be assessed for both total and dissolved iron and total manganese.

**R645-301-724.200 Baseline Surface Water Information Deficiencies:**

1. Data from field studies show that the North Fork of Crandall should not be classified as a perennial stream. During at least two of the fall surveys (1987 and 1992) the North Fork of Crandall was dry approximately 300 feet above the confluence with the South Fork of Crandall Creek. These data would indicate that the North Fork of Crandall should be and has been classified as an Intermittent Stream.
2. The data in Appendix 7-23 depict one stream recorder with the float operating the drum in a clock-wise direction and the other recorder operating in a counter clock-wise direction. Thus, the charts need to be re-examined and the data re-assessed to produce the flows. Genwal commits to providing the correct interpretation of this data to the Division by December 1, 1994.
3. Genwal commits to determining the base flow required in Crandall Creek, to sustain existing flora and fauna, by August 31, 1995.
4. Genwal commits to monitoring station H-1 on Horse Canyon quarterly for the next three years. The monitoring will include collecting instantaneous flows, collecting field data, and collecting water-quality samples for laboratory analyses of the abbreviated groundwater analysis list.
5. Genwal commits to begin the quarterly monitoring of Horse Canyon at H-1 beginning in the Fall quarter of 1994.

6. Appendix 7-3 contains water-quality data associated with both Blind and Crandall Creeks. Appendix 7-42 contains the Seep and Spring Water Quality Data. However, in the past Appendix 7-43 did contain duplicate data for Blind and Crandall Creeks. Thus, Appendix 7-43 has been removed from the Chapter 7 appendices.

**R645-301-728 Probable Hydrologic Consequences Determination Deficiencies:**

1. Genwal has committed to determining the minimum streamflow rate for Crandall Creek by August 31, 1995.
2. Genwal has committed to monitoring 15 seeps and springs on a quarterly basis and collects flow and water quality data from Crandall, Blind and Indian Creeks. Genwal has also agreed to collect quarterly water quality and quantity data from Horse Canyon. All of these data assist in determining and predicting probable hydrologic consequences.

The upper strata of the Blackhawk formation, in the area of the Genwal mine, are relatively impermeable; not tied directly into the regional aquifer (because of the geology and the self-healing nature of the fractures); and act as an aquiclude to the overlying perched-aquifers. In addition, when the exposures of the upper strata of the Blackhawk Formation are field checked groundwater there is an apparent absence of seeps and springs in the area irrespective of whether the area has been mined or not.

It must be remembered that the Crandall Canyon mine is a "dry" mine and that water is pumped into the mine. Thereby further substantiating the fact that the mine is above the regional aquifer. Genwal proposes that the existing PHC meets both the intent and the requirements of both R645-301-728 and R645-301-120.

3. As described above, the Blackhawk Formation does not have a prolific number of seeps or springs. Twenty percent of the springs monitored are from the upper strata of the Blackhawk formation. Because the upper strata of the Blackhawk formation are primarily aquicludes and laboratory data define the materials to be "self-healing" Genwal does not anticipate significant mine inflows or impacts to the seeps and springs.

Therefore, Genwal proposes that the current monitoring plans satisfy the intent of the PHC and satisfy and meet the requirements of R645-301-731.211 and R645-724.310.

4. Three samples of the coal will be collected and submitted to the laboratory for analyses of the parameters listed on page 5-39A by November 15, 1994. A description of the sampling points and methods is presented in Chapter 6 (R645-301-624.330).
5. The PHC has been and will continue to be based on the historical data. Geologic, hydrologic and other pertinent data are collected from required monitoring and as other data become available. Because of the growth of the Crandall Canyon mine over the past 10 years, a significant amount of data have been gathered beyond what would normally be required for permitting and quarterly monitoring. Genwal commits to providing a more detailed comparison and summary for its annual reports.
6. Genwal has contracted with the Forest Service experimental station to conduct erosion and sedimentation studies on Blind Canyon to determine the exact hydrologic consequences to perennial and intermittent streams due to sedimentation.

A discussion on the potential effect of sedimentation in perennial and intermittent streams has been included in the PHC.

**R645-301-731.210 Ground Water Monitoring Plan Deficiency:**

1. SP2-14 and SP2-23 have been eliminated from the list of seeps and springs to be monitored for the following reasons:
  - A. Because of limited coal height, no mining will occur under or within 1/4 mile of these springs.
  - B. Both of these "springs" are either seeps or exhibit no flow. Thus, they are not representative of the groundwater in the upper portions of the South Fork of Horse Canyon.
  - C. Two other springs in the area have been and are being monitored, SP1-9 and SP2-9. Both of these springs exhibit positive flow characteristics and are more representative of actual conditions within the upper reaches of the South Fork of Horse and Blind Canyons.

**R645-301-731.220 Surface Water Monitoring Plan Deficiencies:**

1. Genwal has committed to monitoring station H-1 of Horse Canyon on a quarterly basis.

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2. An operational monitoring plan for Horse Canyon has been included in Chapter 7 of this revised permit application.

**R645-301-731.600 Stream Buffer Zones Deficiency:**

1. Genwal commits to following the Divisions regulations which require notification and approval prior to disturbing any stream or undisturbed areas. Any area which will be disturbed during mine operation or reclamation activities will be defined on appropriate maps and plates and will be submitted to the Division along with necessary designs and other pertinent information for approval.

**R645-301-732.200 Sediment Pond Deficiencies:**

1. The cobble marker has been added to Figure 7-4A. The clean-out elevation has been noted at el 7774.9.
2. The reference in Chapter 2 has been changed to reflect the acid/toxic discussion located on page 7-51. The text in this section meets the requirements of R645-301-120 and R645-301-731.
3. The sediment pond waste storage location has been added to Plate 5-3.
4. According to SCS TR-55 (June, 1986) a paved road with an unlined ditch has a curve number of 93. To be conservative Genwal used a curve number of 95. Plate 7-5A accurately portrays the paved areas at the Crandal Canyon facility.
5. The watershed (drainage) boundary line on the east portion of the sediment pond has been redrawn to accurately depict existing site conditions.
6. The Price office of the U.S. Forest Service has demanded that the sediment pond be removed during final reclamation. Thus, the text has been changed to reflect the removal and reclamation of the sediment pond during final reclamation.

No reference could be found in the current text on page 7-79 to an impounding structure. A word search for "impounding structure" did not reveal the existence of this phrase in Chapter 7.

Genwal has enclosed a copy of our response to an August 24, 1994 letter from Mr. Mark Bailey of the BLM from the Price River Resource Area. The letter was a joint comments/recommendation


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letter from both the U.S. Forest Service and the BLM which desired that Genwal provide additional data or further clarification for the Resource Recovery and Protection Plan (R2P2). To answer several of their comments changes were made to the text of Chapter 5 in the MRP. A copy of their letter and Genwals response is provided for your reading pleasure.

We appreciate your quick reviewing response to this revision. Because of Genwals need to quickly move forward in obtaining the mining permit for LBA#9, we respectfully request that any questions be directed to us by phone to allow us to rapidly respond. Thus, if you have any questions, please call Larry Johnson or myself at (801) 687-9813.

Sincerely,

  
R. Jay Marshall, PE  
Chief Mine Engineer

CC: Mr. Mark Bailey  
Area Manager  
BLM  
Price River Resource Area accurately